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ABSTRACT

This study examined 69 sheltered classes and 26 co-taught classes established in 10 New Instructional Model secondary schools in Philadelphia (Pennsylvania) in the 1990-91 school year. Focus is on the following topics: (1) the extent to which sheltered and co-taught classes are operational at each of the schools; (2) the type and quality of staff development offered to teachers of these classes; and (3) the extent to which teachers of co-taught and sheltered classes diversified their instructional strategies to meet the needs of Limited English Proficiency (LEP) Asian students. The study collected data through teacher workshop evaluation feedback and an in-depth study using observations and interviews of 44 teachers. The evaluation feedback indicates that teachers want more help. The in-depth study shows that most teachers in the sample make language modifications and modifications in materials to meet the needs of LEP students; however, few teachers use visual aids or engage student in hands-on activities. Results demonstrate mixed satisfaction among the team teachers. Teachers report that most students receive passing grades, although high school teachers report student difficulty with reading comprehension, lack of vocabulary knowledge, and inexperience with the concepts taught. Included are two tables. Statistical data for 10 schools are tabulated in one appendix. (JB)

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The School District of Philadelphia

THE SCHOOL DISTRICT OF PHILADELPHIA
OFFICE OF ASSESSMENT

ASIAN REMEDIAL PLAN

A STUDY OF SHELTERED AND CO-TAUGHT CLASSES
IN NEW INSTRUCTIONAL MODEL SECONDARY SCHOOLS

INTERIM REPORT No. 9114

March, 1991

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EXECUTIVE SUMMARY

This study was designed to assess: 1) the extent to which sheltered and co-taught classes are operating at each of the ten New Instructional Model Secondary Schools, 2) the type and quality of staff development offered to teachers of sheltered and co-taught classes and 3) the extent to which teachers of sheltered and co-taught classes diversify their instructional strategies to meet the needs of Limited English Proficiency (LEP) students.

Sixty-nine sheltered classes and 26 co-taught classes have been established at the ten New Instructional Model Secondary Schools in 1990-1991. These classes involve 48 content area teachers and 21 ESOL teachers.

Staff development data show that 20 (42%) content area teachers of sheltered and co-taught classes attended the three-day staff development sessions at the Greenfield School in August, 1990. With the exception of the Middle School Collaborative which has been established to deal with the specific needs of middle school teachers, attendance by content area teachers at subsequent workshops has been sparse.

Evaluation feedback from the Greenfield workshops indicated that content area teachers wanted more help: in expanding their teaching techniques; in developing and applying strategies for specific content areas and in the use of instructional materials. Workshops dealing with instructional strategies have been provided.

An In-depth Study of 20 teachers of sheltered classes and 24 teachers of co-taught[1] classes was conducted in seven of the ten secondary schools. All of the teachers in the sample were observed and interviewed in January, 1991.

Nine (69%) of the high school teachers in the sheltered class sample had previous experience teaching sheltered classes compared with three (43%) of the middle school teachers. In the co-taught class sample, four (22%) of the high school teachers had previous experience with these classes compared with one (17%) of the middle school teachers.

Interview and observation data regarding the use of appropriate instructional strategies indicate that most teachers of sheltered and co-taught classes in the sample made language modifications and modifications in materials to meet the needs of LEP students. However, few teachers were observed employing visual aids or engaging students in hands-on activities. Two high school and six middle school classes were observed with students working in groups or pairs. Three teachers reported using Whole Language techniques and one teacher was observed using them.

[1] Twelve content area teachers and twelve ESOL teachers

Four of the 12 co-taught class teams in the sample reported doing some lesson planning together. All three of the middle school teams felt their collaboration was effective, but six (67%) of the high school teams indicated some dissatisfaction with the arrangement. This was often because the ESOL teacher had little input. Despite this fact, most of the teachers acknowledged that co-taught and sheltered classes were beneficial because they enabled teachers to meet the specific needs of LEP students.

Teachers reported that most students were receiving passing grades. High school teachers identified student difficulties such as reading comprehension, lack of vocabulary knowledge and inexperience with the concepts taught. Middle school students appear to be having less difficulty.

Teacher recommendations included the need for: more appropriate texts and materials for LEP students; smaller and more homogeneous classes; pre-planning sessions at the beginning of the school year, as well as specially tailored staff development throughout the year.

In conclusion, it would appear that centralized staff development does not attract the majority of content area teachers. The format of the Middle School Collaborative may be more effective. Sessions are held at alternate school sites. This may be a viable solution for future staff development workshops at the secondary level. A topic that needs to be addressed is the availability of appropriate instructional materials. Teacher networks could be formed so that teachers can develop and share resources and perhaps involve publishing companies in developing more appropriate materials.

INTRODUCTION

PROGRAM DESCRIPTION

In the 1990-1991 school year, 7 high schools, 3 middle schools and 22 elementary schools serving Asian students adopted the New Instructional Models outlined in the Remedial Plan for Services to Asian LEP Students. The plan requires secondary schools to provide sheltered and co-taught classes to LEP students. These secondary schools are University City High, Furness High, South Philadelphia High, Fels High, Olney High, Northeast High, Vare Middle, Cooke Middle and Harding Middle.

PURPOSE OF THE STUDY

This study was designed to assess:

1) the extent to which sheltered and co-taught classes are operating at each school;

2) the type and quality of staff development offered to teachers of sheltered and co-taught classes, and

3) the extent to which teachers diversify their instructional strategies to meet the needs of LEP students.

FOCUS OF THE STUDY

The major focus of this study was seven secondary schools which were selected for in-depth treatment during the month of January, 1991. The details of the In-depth Study are provided on page 5.

Information was also collected from the 10 secondary schools regarding the number and type of sheltered and co-taught classes operating at each school.

SECTION I: THE EXTENT TO WHICH SHELTERED AND CO-TAUGHT CLASSES ARE OPERATIONAL IN NEW INSTRUCTIONAL MODEL SECONDARY SCHOOLS

As can be seen from Table 1, the School District has instituted 69 sheltered classes and 26 co-taught classes at the ten New Instructional Model Secondary Schools. These classes involve a total of 48* content area teachers, 4 Physical Education teachers and 21 ESOL teachers. A detailed list of classes and teachers is provided in the Appendix.

Table 1
Sheltered and Co-taught Classes Operating in New Instructional Model Schools, 1990-1991

HIGH SCHOOLS		
Sheltered Classes	No. of Classes	No. of Teachers
Content Area	49	30**
Physical Ed./Health	7	4
Co-taught Classes	23	19 (Content) 15 (ESOL)
MIDDLE SCHOOLS		
Sheltered Classes		
Content Area	13	7
Co-taught Classes	3	3 (Content)

* Nine high school content area teachers and three middle school content area teachers teach sheltered and co-taught classes.

** Three ESOL teachers who teach Humanities and Study Skills are not included in this number.

SECTION II: STAFF DEVELOPMENT OFFERED TO CONTENT AREA TEACHERS OF SHELTERED AND CO-TAUGHT CLASSES

Staff development workshops offered to teachers of New Instructional Model Schools in 1990-1991 and evaluations of these workshops can be found in the report regarding the use of the ESOL Standardized Curriculum.[1] A Middle School Collaborative has also been formed to deal with the particular needs of middle school teachers. This is being led by experienced Cooke Middle School teachers and ESOL supervisors.

Twenty (42%) content area teachers of sheltered and co-taught classes attended the three-day staff development workshop at the Greenfield School in August, 1990. Four of seven middle school content area teachers are also attending the Middle School Collaborative. Attendance at the other workshops offered between August and December, 1990 has been sparse.

Evaluation feedback indicates that content area teachers found the session (August, 1990 at Greenfield) dealing with Cooperative Learning techniques and small group instruction most valuable. They asked for more help in expanding their teaching techniques, in developing and applying teaching strategies for specific content areas and grades, and for workshops on the availability and use of instructional materials.

Feedback from the Middle School Collaborative indicates that the group has been dealing with specific concerns such as the need for appropriate materials, lack of staff continuity, rostering problems, grading and citywide testing. Table 2 provides attendance figures for each workshop.

[1] An Assessment of the Use of the ESOL Standardized Curriculum in New Instructional Model Schools. School District of Philadelphia. Report No 9107, 1991.

Table 2

STAFF DEVELOPMENT SESSIONS OFFERED TO NEW INSTRUCTIONAL MODEL SCHOOLS SHELTERED AND CO-TAUGHT TEACHERS

Topics	Dates 1990	Remedial Plan Participation		Leaders
		No. of Secondary Content Teachers	No. of Secondary Schools Represented	
ESOL and Content Areas	August 27	20	6	School District Teachers
Using the ESOL Standardized Curriculum and Instructional Materials: A Crosswalk	August 27	20	6	ESOL Supervisors
Whole Language Strategies	August 28	20	6	Illinois Resource Center
Thematic Units	August 28	20	6	Illinois Resource Center
Cooperative Learning Strategies	August 29	20	6	Illinois Resource Center
Peer Coaching	August 29	20	6	Illinois Resource Center
Reading and Writing in the Whole Language Approach	October 20	1	1	Dr. Margaret Van Naerssen, University of Pennsylvania
Developing Thematic Units	October 23	1	1	Ms. Ann Beusch, Hood College
Peer Coaching	November 2-3	5	3**	Judy Kwiat, Illinois Resource Center
Teachers of Sheltered and Co-Taught Classes - Coffee and Conversation*	November 5	2	2	ESOL Supervisors
Assessing Student Performance*	November 28	0	0	Ms. Katherine Thayer, RMC Research Corp. NH
Thematic Units and the Whole Language Approach*	December 1	1	1	Ms. Ann Beusch, Hood College
The New Instructional Models In the Middle Schools*	December 5	4	3	Cooke School Staff & ESOL Supervisors
Promoting Higher Order Thinking Skills*	December 10	0	0	Dr. Connie Cochran, Mid-Atlantic Multifunctional Resource Center--Silver, Spring, MD

* These sessions were not evaluated

** Peer Coaching was available only to those who had not participated in prior years.

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SECTION III: IN-DEPTH STUDY OF SHELTERED AND CO-TAUGHT CLASSES

METHODOLOGY

Seven of the ten New Instructional Model Secondary Schools (four high and three middle) were included in the in-depth study. A sample of sheltered and co-taught teachers was randomly selected at the four high schools. At the three middle schools all teachers of sheltered and co-taught classes were included in the study. Teachers were observed and interviewed during the month of January, 1991. Efforts were made to observe teachers of different disciplines.

The evaluators transcribed each 45 minute lesson; follow-up interviews varied from 20 to 40 minutes in length. The evaluators met weekly to discuss and analyze the findings and to ensure reliability in the interpretation of the findings.

HIGH SCHOOL SAMPLE

The number of classes selected for intensive study at the four high schools are listed below. It should be noted that there were no co-taught classes at Kensington High School. The principal was notified about the new program at the end of June, 1990. It was therefore too late to obtain the additional content area teachers needed for co-taught classes.

University City	= 3 sheltered classes 3 co-taught classes
South Philadelphia	= 3 sheltered classes 2 co-taught classes
Kensington	= 2 sheltered classes
Olney	= 6 sheltered classes 4 co-taught classs

MIDDLE SCHOOLS

The number of classes selected for intensive study at the three middle schools are listed below. It should be noted that there were no co-taught classes at Harding Middle School.

Vare	= 3 sheltered classes 1 co-taught class
Cooke	= 3 sheltered classes 2 co-taught classes
Harding	= 3 sheltered classes

1. IN-DEPTH STUDY OF HIGH SCHOOL SHELTERED CLASSES

Thirteen teachers of sheltered classes were observed and interviewed at the four high schools selected for intensive study. This sample represents 43% of the content area sheltered class teachers in all seven New Instructional Model High Schools.[1]

Six (46%) of the teachers in the sample had more than two years of experience teaching sheltered classes. Three teachers (23%) had one year of experience and four had no previous experience with sheltered classes.

STAFF DEVELOPMENT

Four (31%) of the teachers in the sample had attended one of the special staff development sessions offered to New Instructional Model Schools this year.

CLASSROOM OBSERVATIONS

During the observations, American History classes (N=3) dealt with The Constitution and The Civil War. World History classes (N=2) dealt with Greek and Roman Civilization and Explorers. The Geography class dealt with the topic "What Is Geography?". Biology classes (N=3) covered Classification, Viruses and Infection, Environment v. Genetics and One-Celled Animals (Amoebas). The format for most of these lessons was strikingly similar, i.e. explanation, discussion and reference to text-books. Mathematics classes were typified by students working on math problems. Teachers and students worked through problems together and then students attempted some problems on their own.

LANGUAGE MODIFICATIONS

Interview data revealed that teachers of sheltered classes reported making the following language modifications: 1) explaining vocabulary

[1] Teachers of sheltered Physical Education Classes not included.

and terms carefully, 2) giving lots of examples to ensure understanding and 3) speaking clearly and distinctly. Three teachers reported that they speak more slowly and simplify language, whereas two others stated that they deliberately do not modify their speech or the rate at which they speak. An American History teacher indicated that he does not lecture much, but instead has students work in small groups. This was not observed during the classroom visits. Two Mathematics teachers reported de-emphasizing words and concentrating on math symbols and calculations.

MODIFICATIONS IN MATERIALS

Texts used in the sheltered class sample ranged from 3rd to 10th grade, but most (N=11) were in the 5th to 8th grade range. Teachers reported making the following modifications to these texts: 1) using the blackboard extensively for notes and summaries and relying less on texts, 2) simplifying the language and the content of the texts

Additional modifications (each reported by one or two teachers) were: avoiding sections of the text that require greater language proficiency; bringing materials from other texts; using additional worksheets, summary sheets and creating study guides. One Mathematics teacher indicated that he presents word problems in patterns so that students can tackle them without understanding every word.

VISUAL AIDS AND HANDS-ON ACTIVITIES

Two classes were observed where teachers used a visual aid (pull-down map). One class was observed engaged in hands-on activities involving mapping.

With the exception of the three Mathematics teachers, all of the teachers reported using visual aids, such as films, film strips, VCR tapes,

transparencies (over-head projector), slides, diagrams, charts, maps globes, posters and pictures. Five (38%) of the teachers in the sample reported using hands-on activities. These included constructing simple machines, doing experiments, using chemical kits and microscopes in Science classes and using maps and globes in History and Geography classes. No hands-on activities were reported for the Mathematics classes.

WHOLE LANGUAGE AND COOPERATIVE LEARNING

The use of Whole Language techniques was not in evidence during the observations and 9 (69%) of the teachers indicated they were not familiar with Whole Language. The remaining four teachers reported that they do not use Whole Language techniques.

One class was observed with students working in groups. Nine (69%) of the teachers in the sample reported pairing or grouping students for certain activities.

STUDENT DIFFICULTIES

Although all of the teachers in the sample reported that most students were receiving passing grades, difficulties most frequently cited were problems with comprehension, lack of vocabulary knowledge and inexperience with the concepts taught. One teacher also mentioned that the wide range of proficiencies among students created difficulties.

THE BENEFITS OF SHELTERED CLASSES

Most of the teachers viewed sheltered classes as beneficial because they were able to set the appropriate pace, give students the attention they need, deal with cultural and social issues and provide a climate where students could develop skills and confidence and could feel

comfortable speaking up and asking questions. One teacher felt that his class would be beneficial if he had fewer students. He has 33 students in his class. Another felt that the class was beneficial only for those students who had sufficient language proficiency.

TEACHER RECOMMENDATIONS

The following recommendations were made by one or two teachers:

1) Need more materials and visual aids appropriate for LEP students.

2) Class size should be smaller (12-15 students).

3) Need more homogeneous grouping.

4) Give American History over two years (instead of one) so that the appropriate amount of material can be covered.

SUMMARY OF FINDINGS

. 69% of the teachers had at least one year of experience in teaching classes.

. 31% attended at least one of the special staff development sessions offered to New Instructional Model Schools.

. Teachers frequently reported making the following language modifications: explaining vocabulary and terms carefully, giving lots of examples and speaking clearly and distinctly.

. Texts used were primarily in the 5th to 8th grade range.

. Major modifications in materials reported by teachers were: simplifying the language and content of the texts and using the blackboard extensively for notes and summaries.

. With the exception of Mathematics teachers, all of the teachers reported using a variety of visual aids. Two teachers were observed using one.

. 38% of the teachers reported using hands-on activities. One class was observed engaged in hands-on activities.

. Whole Language techniques are not used by any of the teachers in the sample.

. 69% of the teachers reported pairing or grouping students for certain activities. One class was observed with students working in groups.

- Student difficulties most frequently cited were problems with comprehension, lack of vocabulary knowledge and inexperience with the concepts taught.

- 85% of the teachers viewed sheltered classes as beneficial.

- Recommendations included the need for more materials and visual aids, as well as smaller and more homogeneous classes.

2. IN-DEPTH STUDY OF HIGH SCHOOL CO-TAUGHT CLASSES

Eighteen teachers of nine co-taught classes were observed and interviewed at the four high schools selected for intensive study. This sample represents 47% of the co-taught teams in all seven New Instructional Model High Schools. There were no co-taught classes at Kensington (see page 5).

Fourteen (78%) of the teachers in the sample had no previous experience teaching co-taught classes. Four teachers had two years of experience.

STAFF DEVELOPMENT

Seven (39%) of the teachers in the sample had attended one of the special staff development sessions offered this year to New Instructional Model Schools. Three of these teachers were ESOL teachers.

CLASSROOM OBSERVATIONS

During the observations, World History classes (N=3) dealt with The History of the Moslem Religion; The Fall of the Roman Empire and Buddhism. The American History class covered The Civil War. General Physical Science classes (N=4) covered Valences and Compounds, Electronics, Oxidation, Work and Power (textbook lesson) and an experiment with Polluted Water. The Orientation to Mathematics class dealt with Changing Fractions to Decimals.

LANGUAGE MODIFICATIONS

Interview data revealed that almost all of the teachers in the co-taught sample mentioned the need to teach vocabulary. Thirty-nine percent reported speaking slowly and carefully and 33% reported simplifying their language and explaining concepts carefully.

Two or three teachers mentioned giving lots of examples, providing constant reinforcement and repetition, and encouraging students to use dictionaries.

One teacher mentioned using oral reading as a model for students; another translates directions into Chinese and Vietnamese. One team in General Physical Science favors looking at print over oral explanations. Another teacher felt that science vocabulary was difficult to teach because there was no simple way to explain complicated terms.

MODIFICATIONS IN MATERIALS

Texts used in the co-taught classes ranged from 2nd to 10th grade, but most (N=5) were in the 4th to 5th grade range. Three teams use one difficult and one easier text. Two teams do not use texts but draw materials from a variety of sources and provide class notes.

Teachers reported making the following modifications to these texts: 1) paraphrasing the text, 2) using summary sheets and worksheets and 3) shortening or simplifying the exercises. Other modifications mentioned by one or two teachers were: making extensive use of the board for notes; supplementing the main text with a second text; bringing in materials from other sources; using directed reading activities and using symbols in Math instead of language.

VISUAL AIDS AND HANDS-ON ACTIVITIES

Two classes were observed where teachers used visual aids, i.e. pull-down maps and a film about the Moslem Religion. Sixteen (89%) of the teachers reported using visual aids such as VCR's, transparencies (overhead projectors), film strips, graphs, diagrams, maps and pictures. The Mathematics team reported minimal use of visuals.

One class was observed with students engaged in hands-on activities. Students were in groups conducting an experiment with beakers of water. Sixty-one percent of the teachers indicated that they use hands-on activities in their classes. These included the use of realia and manipulatives in Mathematics and American History classes. Pulleys, prisms, lab equipment and chemical kits were used in General Physical Science and mapping was used in World History.

WHOLE LANGUAGE AND COOPERATIVE LEARNING

The use of Whole Language techniques was not in evidence during the observations. Fifteen (83%) of the teachers indicated that they do not use Whole Language techniques and 44% were unfamiliar with the approach. The remaining three (17%) felt they were using Whole Language when they provided students with experiential activities.

One class was observed with students working in groups on an experiment with polluted water. Four teams reported using Cooperative Learning for science experiments or for group projects. Five teams sometimes pair students who speak the same native language to help each other.

STUDENT DIFFICULTIES

Teachers reported that at least 70% of their students were receiving passing grades, with the exception of one class in Science where only 40% were passing. Difficulties most frequently cited were problems with reading comprehension and difficulties with following directions. Science vocabulary and concepts were particularly problematic.

COOPERATION BETWEEN TEACHERS

One team was observed where each of the teachers took responsibility for teaching part of the lesson. In most classes the ESOL teacher was generally observed helping individual students for the whole lesson while the content area teacher taught. In two classes, the ESOL teacher also wrote vocabulary or answers on the board.

Interview data indicated that in five of the nine teams the content area teacher assumes major responsibility for teaching the class. The ESOL teachers generally explain or present vocabulary and concepts in different ways and reinforce what is being taught by tutoring students. Four additional teams reported that the ESOL teacher primarily works with individual students.

PLANNING AND COLLABORATION

Three teams indicated that they do some planning together and felt that their collaboration was effective. Six teams reported that the content area teacher works on the lesson plan alone and consults with the ESOL teacher before or after class. Content area teachers tended to view this arrangement as more effective than did ESOL teachers.

THE BENEFITS OF CO-TAUGHT CLASSES

Six teams in the sample viewed co-taught classes as beneficial because they were better able to meet the needs of LEP students, give them the attention they need and gear lessons to the students' proficiency levels. Three teams were less enthusiastic due to problems they were encountering with their partners.

TEACHER RECOMMENDATIONS

The following recommendations were made by one or more teachers:

1) Need more appropriate materials for LEP students such as published materials for World History, General Science and Health, as well as cassettes with a bilingual text, bilingual dictionaries, information packages and visual aids (N=3).

2) Class size should be smaller (N=3).

3) Need common period to meet (N=3).

4) Need specially tailored staff development throughout the year (N=2).

5) Need more teachers or tutors who can speak the same language as the students (N=2).

SUMMARY OF FINDINGS

. 78% of the teachers had no previous experience teaching co-taught classes.

. 39% attended at least one of the special staff development sessions offered to New Instructional Model Schools.

. Teachers reported making the following language modifications: teaching vocabulary, speaking slowly and carefully, simplifying language and explaining concepts carefully.

. Texts used were primarily at the 4th to 5th grade levels.

. Major modifications in materials reported by teachers were paraphrasing the text, using summary and worksheets and shortening or simplifying exercises.

. 89% of the teachers reported using a variety of visual aids. Two teams were observed using one.

. 61% of the teachers reporting using hands-on activities. One class was observed with students engaged in hands-on activities.

. Whole Language techniques are not used by any of the teachers.

. All of the teams reported grouping or pairing students for some activities. One class was observed with students working in groups on a Science experiment.

. Student difficulties most frequently cited were reading comprehension and problems following directions.

- Three of nine teams do some lesson planning together and felt their collaboration was effective.

- Six of nine teams viewed co-taught classes as beneficial.

- Recommendations included the need for more materials, smaller class size, specially tailored staff development and more bilingual teachers and tutors.

3. IN-DEPTH STUDY OF MIDDLE SCHOOL SHELTERED CLASSES

Nine sheltered classes were observed and seven teachers were interviewed (some teachers taught more than one discipline) at the three middle schools. This represents 100% of all content area teachers of sheltered classes in the New Instructional Model Middle Schools.

Four (57%) of the teachers had no previous experience teaching sheltered classes. Three teachers had two years of experience.

STAFF DEVELOPMENT

Six (86%) of seven teachers attended at least one of the special staff development sessions offered to New Instructional Model Schools this year. Four of these teachers are attending the Middle School Collaborative and two others have attended at least one of the other workshops.

CLASSROOM OBSERVATIONS

During the observations, Social Studies classes (N=3) dealt with the Civil Rights Movement, the War in the Middle East, Bodies of Water and the Route to Iraq. Science classes (N=3) dealt with the Human Circulatory System, the Earth's Atmosphere. One class constructed a telegraph. Mathematics classes (N=4) were typified by students working on Mathematics problems; one class had a Math Bee.

LANGUAGE MODIFICATIONS

Interview data revealed that teachers of sheltered classes reported making the following language modifications: 1) explaining and simplifying vocabulary, 2) using analogies, illustrations and symbols as much as possible, and 3) paraphrasing.

MODIFICATIONS IN MATERIALS

Five (71%) of the teachers indicated that they do not use a text but instead pull materials from a variety of sources. They reported using illustrated materials such as worksheets with pictures, graphs, and charts. One Social Studies teacher structures his lessons on current events. A Science teacher is rewriting chapters of the text and another prefers basing lessons on the Franklin Institute Science Kit.

VISUAL AIDS AND HANDS-ON ACTIVITIES

One class was observed where the teacher used a visual aid, a transparency shown with an overhead projector. All of the teachers but one reported using visual aids such as pictures, vocabulary posters, flashcards, videos, films, film strips, transparencies (overhead projector) and a mini greenhouse.

Two classes were observed engaged in hands-on activities. In a Science class, students were constructing a telegraph and in Social Studies they were using maps. Four (57%) of the teachers reported using hands-on activities. These included: 1) experiments, use of science kits, microscopes and a life-size human model in Science; 2) using maps and globes and making collages or posters in Social Studies and 3) using manipulatives in Mathematics.

WHOLE LANGUAGE AND COOPERATIVE LEARNING

One teacher was observed using Whole Language and Cooperative Learning techniques. The class was broken up into four groups and each was given a different article to read about the Civil Rights Movement. They were asked to write five important facts and a summary expressing their feelings.

Three (43%) of the teachers reported that they employ Whole Language techniques by using either an experiential approach; having children write original stories or using thematic units. The remaining four teachers indicated that they were not familiar with Whole Language.

Three classes were observed with students working in groups and two were observed with students working in pairs. Groups were observed: 1) constructing a telegraph; 2) reading, discussing and writing about the Civil War and 3) writing sentences together about the Human Circulatory System. Pairs were engaged in writing a letter to Hussein in one class and working together with dictionaries in another. Of the three remaining teachers, one reported being somewhat familiar with Cooperative Learning but does not use this technique. The two others were unfamiliar with the concept.

It should be noted that one middle school is offering on-site staff development in Co-operative Learning for interested teachers. Two of the three sheltered class teachers at that school are participating in these workshops.

STUDENT DIFFICULTIES

All of the teachers reported that most of their students are receiving passing grades and are able to complete their assignments and take tests. One Science teacher reported that his ESOL students manage to cover more material than students in his mainstream class. The 10-15% of the students who are having difficulty lack study and test-taking skills and have poor attendance. One teacher indicated that her students are shy about talking in class and that the younger students (5th-6th grade) are intimidated by the older students (7th-8th grade).

THE BENEFITS OF SHELTERED CLASSES

Five (71%) of the teachers viewed sheltered classes as beneficial because: 1) they are able to adapt their teaching to meet students' needs and 2) students feel much more comfortable in a sheltered situation. One teacher acknowledged that students would be intimidated in a regular class, but felt they would be forced to use more English. The remaining teacher is a recently appointed long-term substitute and felt that he could not comment.

TEACHER RECOMMENDATIONS

The following recommendations were made by one or more teachers:

1) Need specific texts and materials which are appropriate for LEP students (N=4).

2) Need pre-planning sessions for teachers involved in sheltered classes to make transition from regular classes easier. Need more direction in general (N=2).

3) Grades should be separated (N=2).

4) One teacher felt the need for a more specific curriculum, while another liked the freedom of not having a specific curriculum to follow.

SUMMARY OF FINDINGS

- 57% of the teachers had no previous experience teaching sheltered classes.
- 86% had attended at least one of the special staff development sessions offered to New Instructional Model Schools.
- Teachers reported making language modifications such as explaining and simplifying vocabulary; using analogies, illustrations and symbols, and paraphrasing.
- 71% of the teachers do not use a text but instead pull materials from a variety of sources.
- Major modifications in materials were the use of worksheets with pictures, graphs, charts and other illustrated materials.

- 86% of the teachers reported using visual aids. One teacher was observed using one.

- 57% of the teachers reported using hands-on activities. Two of the classes were observed engaged in hands-on activities.

- 43% of the teachers reported using Whole Language techniques. One teacher was observed using Whole Language techniques.

- 57% of the teachers reported either grouping or pairing students for certain activities. Five classes were observed with students working in groups or pairs.

- Teachers reported that most students are performing well in these classes.

- 71% of the teachers viewed sheltered classes as beneficial.

- Recommendations included the need for specific texts and materials; pre-planning sessions; more direction and the separation of grades.

4. IN-DEPTH STUDY OF MIDDLE SCHOOL CO-TAUGHT CLASSES

Six teachers of three co-taught Orientation to Mathematics classes were observed and five were interviewed. This represents 100% of all teachers of co-taught classes in the New Instructional Model Middle Schools.[1] There were no co-taught classes at Harding. Only one teacher had previous experience in teaching a co-taught class.

STAFF DEVELOPMENT

All (N=6) of these teachers are attending the Middle School Collaborative. Three also attended at least one of the special staff development sessions offered this year to New Instructional Model Schools.

CLASSROOM OBSERVATIONS

During the observations, one class dealt with the concepts of "greater than and lesser than". Students were broken up into groups to work with manipulatives. In another class students were making flash cards of word problems. In the third class a clock was drawn on the board and students made drawings of different times in their notebooks.

LANGUAGE MODIFICATIONS

Teachers reported making the following language modifications: 1) simplifying speech, 2) explaining vocabulary, 3) taking long pauses between phrases and giving students time to regroup concepts,

[1] It should be noted that the three content area teachers also teach sheltered classes.

4) rephrasing explanations and building redundancy and 5) using body language.

MODIFICATIONS IN MATERIALS

Texts used by two of the co-taught teams are at the 5th grade level, but they reported that the texts were difficult. The third team selects materials from various sources because there is no appropriate text.

Teachers reported making the following modifications to the texts: 1) pacing the materials more slowly and 2) using illustrated materials, symbols, graphs and charts as much as possible.

VISUAL AIDS AND HANDS-ON ACTIVITIES

One class was observed where the teacher used a visual aid (picture of a clock with hands drawn on the board). All of the teachers reported using visual aids such as pictures, illustrations, transparencies (overhead projector), films and VCR tapes.

One class was observed with students engaged in hands-on activities. Students worked in groups with manipulatives. Two teams (66%) reported using hands-on activities in their classes which employ manipulatives such as cuisinnaire rods, beads, poker chips and marbles.

WHOLE LANGUAGE AND COOPERATIVE LEARNING

The use of Whole Language techniques was not in evidence during the observations. Although at least one member of each team said they were familiar with Whole Language, they did not report using Whole Language techniques.

One class was observed using Cooperative Learning techniques. Students were working in groups with manipulatives to solve Mathematics problems. The content area teacher is attending workshops in

Cooperative Learning at her school. One team reported that they group students who are having trouble with the material. The third team reported pairing students to help each other.

STUDENT DIFFICULTIES

Teachers indicated that most students were receiving passing grades, but in one class 25% of the students were taking the course for the second time. The teaching team described this group as immature and slow. Reading was a problem for these students. Another team mentioned that the maturation levels between younger and older students created difficulties.

COOPERATION BETWEEN TEACHERS

One team reported that they often switch roles during the lesson. This was not observed during the observation. The two other teams reported that one teacher always assumes the major responsibility for teaching the lesson while the other helps students who are having difficulty.

PLANNING AND COLLABORATION

One team indicated that they meet regularly and plan lessons together. Two teams reported that one teacher does the planning and informs the other in brief daily discussions. All three teams felt that their collaboration was effective.

THE BENEFITS OF CO-TAUGHT CLASSES

All of the teachers viewed co-taught classes as beneficial because of the individual help they are able to provide and because they can pace the lessons more appropriately.

TEACHER RECOMMENDATIONS

Only two recommendations were made, each by one teacher:

1) There is too wide a range of skills. Need to group students accordingly.

2) Need to ensure that paired teachers are compatible.

SUMMARY OF FINDINGS

. Five of six teachers had no previous experience teaching co-taught classes.

. All six teachers are attending the Middle School Collaborative and three have attended one of the special staff development sessions offered to New Instructional Model Schools.

. Teachers reported making a variety of language modifications such as simplifying speech, explaining vocabulary, taking long pauses, building redundancy and using body language.

. Texts used were at the 5th grade level.

. Major modifications in materials mentioned by teachers were slowing the pace and using materials with illustrations. One team does not use a text, but instead uses materials from a variety of sources.

. Teachers reported using a variety of visual aids. One team was observed using one.

. Two teams reported using hands-on activities in their classes. One class was observed engaged in hands-on activities.

. Whole Language techniques were not used by any of the teams.

. One team was observed using Cooperative Learning techniques. The two other teams reported either grouping or pairing students to help each other.

. One team indicated that students were experiencing difficulties with reading. Another felt that maturity differences created difficulties.

. One team reported planning lessons together. All three teams felt their collaboration was effective.

- All three teams viewed co-taught classes as beneficial to LEP students.

- Recommendations included the need to make classes more homogeneous and to ensure compatibility in teaching teams.

A P P E N D I X

SHELTERED CLASSES
HIGH SCHOOLS

Subject Number	Course	ESOL Level	Teacher
University City			
341.02	Gen. Phys. Science	3	Shad
306.01	Biology	3	Shad
306.02	Biology	3	Bess-Pashak
106.01	American History	3 (4)*	Layton
Furness			
150.01	American History	3-4	Levy
335.01	Biology	3-4	Britt
359.01	Science & Tech.	3-4	Lopez
600.01	Home Economics	1	Licciardello
South Philadelphia			
305.21	Biology	3 (4)*	Chazin
305.41	Biology	3 (4)*	Sadres
107.71	American History	3 (2)*	Vetsotsky
107.41	American History	3 (2)*	Vetsotsky
955.11	P.E./Health	3 (2)*	Pendino
955.31	P.E./Health	3 (2)*	Way
Kensington			
	Mathematics	1-2	Abrams
	Geography	1	Haywood
Fels			
131.01	World History	1-2	Finkle

*Some students in the class were at the level in parenthesis.

SHELTERED CLASSES
HIGH SCHOOLS

	Subject Number	Course	ESOL Level	Teacher
Olney				
	105.11	American History	Mostly 2-3	Alexander
	105.21	American History	Mostly 2-3	Alexander
	105.31	American History	Mostly 2-3	Alexander
	105.41	American History	Mostly 2-3	Alexander
	105.51	American History	Mostly 2-3	Alexander
	115.11	Social Science	Mostly 2-3	Segal
	115.41	Social Science	Mostly 2-3	Segal
	135.11	World History	Mostly 2-3	Laut (Bond)*
	135.31	World History	Mostly 2-3	Laut (Bond)*
	135.61	World History	Mostly 2-3	Laut (Bond)*
	205.31	Algebra 1	Mostly 2-3	Kach
	205.51	Algebra 1	Mostly 2-3	Smitter
	295.61	Algebra 1	Mostly 2-3	Smitter
	205.62	Algebra 1	Mostly 2-3	Dinh
	224.61	Algebra 2	Mostly 2-3	Ferko
	235.51	General Math 1	Mostly 2-3	Smitter
	235.52	General Math 1	Mostly 2-3	Mayall
	235.61	General Math 1	Mostly 2-3	Kach
	245.21	General Math 2	Mostly 2-3	Ferko
	245.51	General Math 2	Mostly 2-3	Ferko
	238.51	Math Orientation	1	Mason
	238.51	General Math	2	Kach
	305.11	Biology	Mostly 2-3	Morris (Pollan)*
	305.21	Biology	Mostly 2-3	Hardman
	335.31	Science & Tech.	Mostly 2-3	Oikkab
	345.51	Gen. Phys Science	Mostly 2-3	Niczyporowiczy
	345.61	Gen. Phys Science	Mostly 2-3	Niczyporowiczy
	485.41	Student Skills	Mostly 2-3	Lee**
	975.	Health	Mostly 2-3	Marinari
	964.31	Physical Ed.	Mostly 2-3	Weckley
	965.31	Physical Ed.	Mostly 2-3	Marinari
	965.32	Physical Ed.	Mostly 2-3	Marinari
	965.33	Physical Ed.	Mostly 2-3	Shuster
	985.31	Humanities	Mostly 2-3	Zuvich**
	985.32	Humanities	Mostly 2-3	Horvitz**
	985.33	Humanities	Mostly 2-3	Horvitz**
	907.31	Humanities	2	Zuvich**
Northeast				
	309.01	Biology	1-2	Johnson
	109.01	American History	1-2	Hecht

*Substitute teacher

**ESOL teacher

CO-TAUGHT CLASSES*
HIGH SCHOOLS

Subject Number	Course	ESOL Level	Teacher
University City			
136.01	World History	2 (3)**	Layton/Neill
136.02	World History	2	Lyons/Shulte
341.01	Gen. Phys. Science	2	Bess-Pashak/Rozycki
Furness			
276.01	Orientation to Math	2	Forman/McClurken
355.01	Gen. Phys. Science	2	Lopez/Jugran
152.01	World History	2	Levy/Labradotz
South Philadelphia			
287.11	Orientation to Math	1	Maseloff/Kwong
139.61	World History	2 (3)**	Becker/Marella
139.31	World History	2 (3)**	Becker/Marella
139.11	World History	2 (3)**	Cauldron/Marella
343.72	General Science	2 (3)**	Chazin/Marella
343.21	General Science	2 (3)**	Sadres/Max
343.71	General Science	2 (3)**	Snyder/Marella
Olney			
109.41	American History	2	London/Horvitz
139.41	World History	2	Laut/Grooms
139.42	World History	2	Golson/Roy
148.61	American Culture	1	Swamickannu/Breslow
197.41	World History	2	Swamickannu/Breslow
305.51	Biology	Mostly 2-3	Jones/Lee
359.51	Gen. Phys. Science	2	Feigel/White
359.61	Gen. Phys. Science	2	Feigel/White
346.61	Gen. Phys. Science	2	Jones/Lee
309.41	Biology	3	Jones/Lee

*There are no co-taught classes at Kensington, Fels and Northeast High.
**Some students in the class were at the level in parenthesis.

SHELTERED CLASSES
MIDDLE SCHOOLS

	Subject Number	Course	ESOL Level	Teacher
Vare				
	129.04	Social Studies	3	Jackowitz
	229.04	Mathematics	3	Rossi
	329.04	Science	3	Young
Cooke				
	120.08	Social Studies	3	Bradham
	120.09	Social Studies	3	Mortimer
	220.08	Mathematics	3	Bradham
	220.09	Mathematics	3	Mortimer
	320.08	Science	3	Hojnacki
	320.09	Science	3	Mortimer
Harding				
	129.02	Social Studies	3	Benfield
	229.01	Mathematics	1-2	Benfield
	229.02	Mathematics	3	Benfield
	320.02	Science	3	Benfield

CO-TAUGHT CLASSES
MIDDLE SCHOOLS

	Subject Number	Course	ESOL Level	Teacher
Vare				
	229.03	Mathematics	1	Jackowitz/Lathbury
Cooke				
	220.06	Mathematics	1	Mortimer/Cherico
	220.07	Mathematics*	2	Bradham/Leech

*The Remedial Plan says that this may be sheltered or mainstream. The school decided to make it co-taught.